

## Besluit

### Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-bachelor Technische Bestuurskunde van de Technische Universiteit Delft

	<b>Gegevens</b>
datum	29 september 2017
onderwerp	Naam instelling : Technische Universiteit Delft
Besluit	Naam opleiding : wo-bachelor Technische Bestuurskunde (180 EC)
accreditatie wo-bachelor	Datum aanvraag : 26 april 2017
Technische Bestuurskunde	Variant opleiding : voltijd
Technische Universiteit Delft	Locatie opleiding : Delft
(005646)	Datum goedkeuren panel : 10 oktober 2016
uw kenmerk	Datum locatiebezoeken : 12 en 13 december 2016
-	Datum visitatierapport : 28 maart 2017
ons kenmerk	Instellingstoets kwaliteitszorg : ja, positief besluit van 7 september 2017
NVAO/20172365/ND	
bijlagen	<b>Beoordelingskader</b>
2	Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2014, nr 36791).

#### Bevindingen

De NVAO stelt vast dat in het visitatierapport deugdelijk en kenbaar is gemotiveerd op welke gronden het panel de kwaliteit van de opleiding voldoende heeft bevonden.

#### Advies van het visitatiepanel

Samenvatting bevindingen en overwegingen van het panel.

#### Standard 1

The bachelor's programme Technische Bestuurskunde (TB) offered by the Faculty of Technology, Policy and Management of Delft University of Technology (TU Delft) teaches students to analyse systems that are technically, socio-economically and politically complex. The purpose of the programme is to enable students to become analysts of socio-technological systems and to make them eligible for a range of master's programmes. The general learning outcomes have been elaborated in well-defined, detailed learning outcomes, which meet the Dutch qualifications framework and tie in with the international perspective of the requirements set by the professional field and the discipline.

Pagina 2 van 5 The focus of the TB bachelor's programme on large-scale systems that have a strong impact on society is unique for the Netherlands and is difficult to benchmark internationally. In particular, the emphasis on modelling as an important analysis tool is a specific characteristic of the TB bachelor's programme. The panel assesses standard 1, Intended learning outcomes, as good.

#### *Standard 2*

The TB bachelor's curriculum is a combination of science, engineering, social and behavioural disciplines. It is structured in four clusters: Analysis of Complex Socio-Technical Systems, Governance of Complex Socio-Technical Systems, Mathematical Modelling, and Technology Specialisation in one of the following fields: Built Environment & Spatial Development, Energy & Industry, Information & Communication, or Transport & Logistics. In the third year of the curriculum, students follow a minor, which allows them to study abroad. Students complete their studies with a bachelor's project.

The panel has two points of concern which have been brought forward and recognised by the programme management: the high intake of students with a high dropout rate during the first year and the overall study yield. The panel recommends introducing a better matching tool for prospective students and active monitoring of the effectiveness of the measurements aimed at improving the study yield.

The structuring in clusters guarantees a good balance between the subjects covered in the curriculum. The panel is positive about the innovative way the teaching staff is developing a blended learning environment and encourages the programme management to enable further development and implementation of the combination of online teaching methods and computer learning with intensive face-to-face contact. It established that the content and structure of the TB bachelor's programme enable the students to achieve the intended learning outcomes. Standard 2, the Teaching-learning environment, is assessed as satisfactory.

#### *Standard 3*

The Faculty of Technology, Policy and Management (TPM) described its assessment policy in the Assessment Policy 2013-2014 document. The panel studied a selection of test dossiers and bachelor's theses and the accompanying assessment forms. Furthermore, it held a meeting with the Board of Examiners during the site visit. It verified that the programme has an adequate assessment system. The assessments are valid, transparent and reliable. The Board of Examiners is performing its legally mandated tasks adequately. The panel sees some risks in the preference of the Board of Examiners for an advisory instead of a more controlling position and recommends that it strengthen its independent position to guarantee the quality of the examinations. The panel assesses standard 3, Assessment, as satisfactory.

#### *Standard 4*

The panel established that all learning outcomes are covered in the bachelor's curriculum and concluded that graduates have achieved all learning outcomes before they are allowed to graduate. It studied a selection of 15 bachelor's project reports to assess whether the graduates had achieved the bachelor's graduation level. It concluded that the graduates had demonstrated that they had achieved the level that can be expected from an academic bachelor. It found the bachelor's projects to be adequate.

Pagina 3 van 5 The panel established that the bachelor's programme prepares students well for the Faculty's master's programmes. In addition, there were no indications that students who continued their studies elsewhere had difficulties with the transition or felt ill prepared. Hardly any graduate took up a job on the labour market rather than go on to do a master's programme.

Standard 4, Achieved learning outcomes, is assessed as satisfactory.

*General conclusion*

Considering the assessments of the four criteria for the bachelor's programme Technische Bestuurskunde, the panel assesses the programme as satisfactory.

**Aanbevelingen**

De NVAO onderschrijft de aanbevelingen van het panel.

**Besluit**


Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Technische Universiteit Delft te Delft in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 14 augustus 2017 naar voren te brengen. Bij e-mail van 6 september 2017 heeft de instelling gereageerd maar dit heeft niet geleid tot inhoudelijke wijzigingen.

De NVAO besluit accreditatie te verlenen aan de wo-bachelor Technische Bestuurskunde (180 EC; variant: voltijd; locatie: Delft) van de Technische Universiteit Delft te Delft. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

Dit besluit treedt in werking op 29 september 2017 en is van kracht tot en met 28 september 2023.

Den Haag, 29 september 2017

De NVAO  
Voor deze:

  
Dr. A.H. Flierman  
(voorzitter)

Tegen dit besluit kan op grond van het bepaalde in de Algemene wet bestuursrecht door een belanghebbende bezwaar worden gemaakt bij de NVAO. De termijn voor het indienen van bezwaar bedraagt zes weken.

Standaard		Beoordeling door het panel
1. Beoogde eindkwalificaties	De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen.	goed
2. Onderwijsleeromgeving	Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren.	voldoende
3. Toetsing	De opleiding beschikt over een adequaat systeem van toetsing.	voldoende
4. Gerealiseerde eindkwalificaties	De opleiding toont aan dat de beoogde eindkwalificaties worden gerealiseerd.	voldoende
Eindoordeel		voldoende

De standaarden krijgen het oordeel onvoldoende, voldoende, goed of excellent. Het eindoordeel over de opleiding als geheel wordt op dezelfde schaal gegeven.

Pagina 5 van 5 **Bijlage 2: Panelsamenstelling**

- Prof. dr ir. Rob van der Heijden, Professor in Innovate Planning Methods, Radboud University Nijmegen [chair];
- Prof. dr. Harrie Eijkelhof, emeritus Professor of Physics Education at the Faculty of Physics and Astronomy, and former Director of the Freudenthal Institute for Science and Mathematics Education at the Faculty of Science, Utrecht University;
- Prof. dr. Arthur Petersen, Professor at the Department of Science, Technology, Engineering and Public Policy, University College London, United Kingdom;
- Prof. dr. Marcel Veenswijk, Professor in Management of Cultural Change, VU University Amsterdam;
- Prof. dr. Hens Runhaar, Special Professor of Management of Biodiversity in Agricultural Landscapes, Wageningen University and Research & Utrecht University
- Maarten van Ruitenbeek BSc, master's student in Industrial Engineering and Management, University of Groningen [student member].

Het panel is ondersteund door dr. Barbara van Balen, secretaris (gecertificeerd).